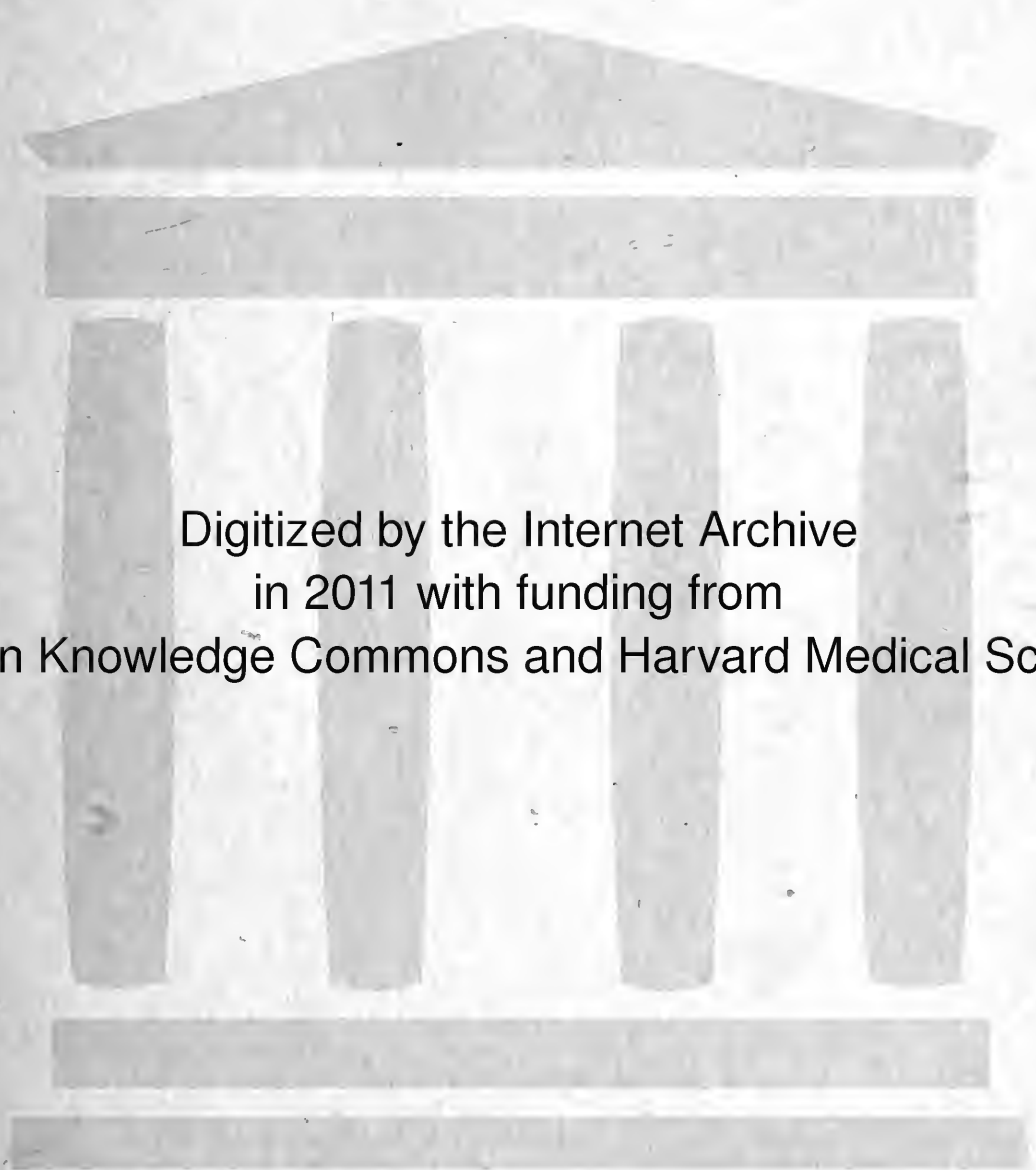


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OF

THE SCARLET FEVER

AND

SORE THROAT.





A N  
A C C O U N T  
O F T H E  
S C A R L E T F E V E R  
A N D  
S O R E T H R O A T,  
O R  
S C A R L A T I N A A N G I N O S A ;

PARTICULARLY AS IT APPEARED AT BIRMINGHAM IN  
THE YEAR 1778.

By WILLIAM WITHERING, M. D.

L O N D O N :

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## ADVERTISEMENT.

*THE Author wishes it to be understood, that whatever is advanced in the following pages, is founded upon his own observations, except where the contrary is expressly mentioned. In order to make the pamphlet useful, it was necessary to publish it speedily: this circumstance he pleads in excuse for small Errors, conscious that no great ones will be found.*

BIRMINGHAM, 1<sup>st</sup> January, 1779.

OF THE  
SCARLET FEVER,  
AND  
SORE THROAT,

As it appeared at *Birmingham*, in the Year 1778.

**T**HIS disease first appeared in Birmingham, about the middle of May, and in the beginning of June was frequent in many of the towns and villages in the neighbourhood. It was preceded by some cases of the true ulcerated sore throat, and accompanied in its course thro' the summer by the chin-cough, the measles, the small-pox, and several instances of the true quinsy.

It continued in all its force and frequency to the end of October, varying however in some of its symptoms

as the air grew colder. In the beginning of November it was rarely met with, but towards the middle of that month, when the air became warmer, it increased again, and in some measure resumed those appearances which it possessed in the summer months, but had lost during the cold winds in October.

Subjects.

It affected children more than adults; but seldom occurred in the former under two years of age, or in the latter when more than fifty. In children the number of boys and girls that suffered from it was nearly equal, but in adults the number of female patients considerably exceeded that of the male; probably because the former were more employed in attendance upon the sick, and consequently more exposed to the infection.

On



On the first seizure the patients feel <sup>Mode of attack.</sup> an unusual weariness, or inaptitude to motion; a dejection of spirits, and a slight foreness or rather stiffness in the throat; with a sense of straitness in the muscles of the neck and shoulders as if they were bound with cords. In a few hours chilly fits take place, generally alternating with flushing heat; but at length the heat prevails altogether. The patients now complain of slight head-ache, and transitory fits of sickness. They pass a restless night, not so much from pain, as from want of inclination to sleep.

The next day the foreness in the <sup>Second day,</sup> throat increases, and they find a difficulty in swallowing, but the difficulty seems less occasioned by the pain excited in the attempt, or by the straitness

A 2

ness

## OF THE SCARLET FEVER

ness of the passage, than by an inability to throw the necessary muscles into action. A total disrelish to food takes place, and the sickness frequently arises to a vomiting. The breathing is short and often interrupted by a kind of imperfect sigh. The skin feels hot and dry, but not hard; and the patients experience frequent, small, pungent pains, as if touched with the point of a needle. Towards evening the heat and restlessness increase; the breath is hot and burning to the lips; thirst makes them wish to drink, but the tendency to sickness, and the exertions necessary to frequent deglutitions are so unpleasant, that they seldom care to drink much at a time. This night is passed with still greater inquietude than the former. In the  
Third day morning the face, neck, and breast, appear redder than usual; in a few  
hours

hours this redness becomes universal, and increases to such a degree of intensity, that the face, body, and limbs, resemble a boiled lobster in colour, and are evidently swollen. Upon pressure the redness vanishes, but soon returns again. The skin is smooth to the touch, nor is there the least appearance of pimples or pustules. The eyes and nostrils partake more or less of the general redness; and in proportion to the intensity of this colour in the eyes, the tendency to delirium prevails.

Things continue nearly in this state for two or three days longer, when <sup>Scarlet colour vanishes.</sup> the intense scarlet gradually abates, a brown colour succeeds, and the skin becoming rough, peels off in small branny scales. The tumefaction subsides at the same time, and the pa-

tients gradually recover their strength and appetite.

During the whole course of the Fever, the pulse is quick, small and uncommonly feeble. The bowels regular in their discharges. The urine small in quantity, but scarcely differing in appearance from that of a person in health. The submaxillary glands are generally enlarged, and rather painful when pressed by the fingers.

The tongue is red and moist, at the end and at the sides, but drier in the middle, and more or less covered with a yellowish brown mucus. The velum pendulum palati, the uvula, the tonsils, and the gullet as far as the eye can reach, partake the general redness and tumefaction. I never saw any real ulceration in these parts, but sometimes collections



collections of thick mucus, particularly on the back of the œsophagus, greatly resembling the specks or sloughs in the putrid Sore Throat, but these are easily washed away by any common gargle.—After the Fever ceases, it is not uncommon to have abscesses form on Abscesses. one or both sides of the neck under the ears, but the matter easily discharges itself through the ruptured teguments, and they heal in a few days without much trouble.—

The above is a picture of the disease in its most usual appearance; but it too frequently assumes a much more fatal form.

In children, the delirium commences Dangerous symptoms in children. in a few hours after the first seizure.

The flesh is intensely hot: the scarlet colour appears on the first or second

day, and they die very early on the third.

In others who survive this rapid termination, when the scarlet colour turns to brown, and you would expect their recovery, the pulse still remains feeble and quick, the skin becomes dry and harsh, the mouth parched, the lips chapped and black; the tongue hard, dry and dark brown, the eyes heavy and sunk; they express an aversion to all kinds of food, and extreme uneasiness upon every the least motion or disturbance. Thus they lie for several days, nothing seeming to afford them any relief. At length a clear amber coloured matter discharges in great quantities from the nostrils, or the ears, or both, and continues so to discharge for many days. Sometimes this discharge has more the appearance of pus, mixed with

with mucus. Under these circumstances when the patients do recover, it is very slowly; but they generally linger for a month or six weeks from the first attack, and die at length of extreme debility.

In adults, the rapidity of the fever,<sup>In adults.</sup> the delirium, &c. is such that they die upon the fourth or fifth day, especially if a purging supervenes. Some survive to the eighth, or to the eleventh day; in all these the throat is but little affected: the eyes have an uncommon red appearance, not that streaky redness which is evidently occasioned by the vessels of the cornea being injected with red blood, but an equable shining redness, resembling that which we remark in the eye of a ferret\*. But notwithstanding this morbid appearance in the

\* *Mustela furo*.—LINN.

eye, the strongest light is not offensive. This appearance may often be discovered, by lifting up the upper eyelid, some hours before it shews itself in the part of the eye that is usually visible, and it is of some consequence to attend to this circumstance, as it greatly influences the event of the case.

**Livid spots** Besides the full scarlet colour described above, there are frequently small circular spots of a livid colour about the breast, knees and elbows. The patients are extremely restless, clamorous, and desirous to drink; but after swallowing one or two mouthfuls, upon taking another, seem to forget to swallow, and let it run out at the corners of the mouth; whilst others spurt it out with considerable force, and are very angry if urged to drink again. In these cases, the scarlet colour appears very soon



soon after the attack, but in an unsettled irregular manner; large blotches of red, and others of white intermixed and often changing places. The pulse from the very beginning so quick, so feeble, and so irregular, that it is hardly possible to count it for half a minute at a time.---It is needless to add, that the greater part of those who laboured under these dreadful symptoms died. A few recovered, and others fell into a state of debility bordering upon idiotism, from which they were rescued by time, and generous living.---

In one patient, a man, the jaw was so perfectly locked upon the third day, that it was impossible to get any thing down his throat; and he died early upon the fifth day. In one man, when the scarlet of the skin was turning brown, several white blisters arose

Particular symptoms.

## OF THE SCARLET FEVER

arose upon different parts of his hands and feet, which when cut open appeared quite dry ; but in a boy where similar blisters appeared, some of which were cut in a few hours afterwards, a thin pellucid watery fluid was discharged. In this case too the scarlet colour of the skin, the second day after its appearance, changed to a dark lead, or rather violet colour. I have been told of three instances, in which the desquamation was so complete, that even the nails separated from the fingers.

Autumnal  
appear-  
ances.

These were the appearances during the hot months, but in the month of October, when the air became colder, the scarlet colour of the skin was both less frequent and less permanent. Many patients had no appearance of it at all, whilst others, especially adults, had a few very minute red pimples, crowned  
with

with white pellucid heads, but these only appeared in the parts where the skin is most tender. The inside of the throat was very considerably tumefied, so as to render deglutition painful and difficult; its colour a dull red, sometimes tending to a livid. This affection of the fauces in some patients seemed to extend down the gullet to the stomach, and was accompanied with painful efforts to vomit, particularly whenever any thing was swallowed: in others it spread itself down the windpipe to the lungs, as was evident from the cough, the strait breathing, and other peripneumonic symptoms. And in others again, its progress along the *Eustachian* tube was indicated by sharp pains in the ear. The eyes had less of that redness described before, but still a slight tinge of it was visible, together with the shining watery appearance  
which

which in the measles is so remarkable, and a great aversion to light. The patients too had always a general painful foreness in all the limbs, and not unfrequently very acute pains in the ancles, knees, wrists and elbows, attended with more or less swelling where the pain was most violent.

In most of these cases, the pulse beat 130 or 140 strokes in a minute, small, but yet hard, and sometimes sufficiently so to justify the opening of a vein. The blood thus taken away, in every instance when cool, appeared fizy, and the whole crassamentum firm.

Through the course of the disease large quantities of viscid mucus, and other matter with much of the purulent appearance, were from time to time discharged from the throat and nostrils.

Some

Some threw out several white or ash-coloured floughs, though no such floughs were visible upon inspecting the throat; but in most, the fauces, particularly the tonsils were covered with them, and upon their separation appeared raw, as if divested of their outer membrane.

The Fever under this autumnal appearance, generally terminated favourably on the fifth, eighth, or eleventh day, but sometimes was protracted to a much greater length, by the formation of large painful abscesses; and I have been told of several cases that were followed by a numerous succession of boils upon different parts of the body. But no symptom was more troublesome to some individuals, than exulcerations at the sides and down towards the root of the tongue, which were so painful as to deprive them of the power to take solid food, even several days after the inclination for it had returned.



*Of the consequential Disease.*

**H**APPY would it be for the ease of the practitioner, but still more so for that of the patient, if the baleful influence of the Scarlet Fever and Sore Throat had its termination here. But in ten or fifteen days from the cessation of the Fever, another train of symptoms demands the attention of the former, and exercises the sufferance of the latter. They feel, after a few days amendment, a something that prevents their further approach to health: an unaccountable languor and debility prevails, together with a stiffness in the limbs, an accelerated pulse, disturbed sleep, disrelish to food, and a paucity of urine.

These

These symptoms are soon followed by an universal swelling of the anasar-cous kind, and sometimes an ascites. Drop<sup>sy</sup>. In some patients the feverish disposition runs high, in others it exists only in a moderate degree. In some the drop<sup>sy</sup> affects the brain, producing coma-vigil, delirium, blindness; with the most enlarged expansion of the iris, which is incapable of contraction in the strongest light. In others, the drop<sup>sy</sup> falls upon the lungs, and produces every symptom of the true hydrops pectoris. The tongue is dry and brown; the skin harsh; the urine of a deep mahogany colour, small in quantity, and depositing a sediment of a still deeper hue, and in a powdery form.

The urgency of these symptoms, added to the very evident appearance

B

of

of disease, soon compel the patients or their friends to apply for assistance, and the event, under the mode of treatment hereafter to be described, is almost always favourable.



*Of the Scarlet Fever,*

As described by Medical Authors.

THE Scarlet Fever in its simple state, is not a very uncommon disease in England, but its combination <sup>Common disease.</sup> with a sore throat, as described above, the violence of its attack, and the train of fatal symptoms that follow; are circumstances hitherto unnoticed by English writers. SYDENHAM gives us a chapter upon the Scarlet Fever, in which he observes, (a) that it ge-

(a) *Scarlatina febris, licet nullo non tempore possit incidere, ut plurimum tamen exeunte æstivo se prodit, quo quidem integras familias, infantes vero præ cæteris infestat. Rigent, horrentque sub initio ut in aliis febribus, qui hæc afficiuntur, neque vehementer admodum ægrotant: postea cutis universa maculis parvis rubris interstinguitur, crebrioribus certè et multo latioribus, magisque rubentibus, at non perinde uniformibus, ac sunt illæ quæ Morbillos constituunt. Ad duos trèsve dies persistunt hæ maculæ, quibus demum evanescentibus dece-*

## OF THE SCARLET FEVER

nerally makes its appearance toward the end of summer, that it attacks whole families, but particularly children; that they are seized with chillness and shivering as in other fevers, but without much sickness. Afterwards the whole skin is covered with small red spots, more numerous, much

dentéque subjēctâ cuticulâ, ressant fursuraceæ quædam squamulæ ad instar farinæ corpori inspersæ, quæ ad secundam aut tertiam vicem se promunt, conduntque vicissim.

- - Satis habeo, ut æger à carnibus in solidum abstineat, et à liquoribus spirituosus quibuscunque, tum ut neque usquam forâs prodeat, neque se perpetim lecto affigat. Cutē jam penitus desquamatâ, et cessantibus symptomatis, è re fore existimo ut purgetur æger leni aliquo medicamento, ætati atque viribus accommodo. Simplicī hâc et naturali planè methodo, hoc morbi nomen (vix enim altius assurgit,) sine molestiâ, aut periculo quovis facillimè abigitur.

Veruntamen hoc animadvertendum volo. Si *convulsiones Epilepticæ* vel etiam *Coma*, huic morbo sub initium eruptionis supervenerint (quod quandoque accidit in pueris ac junioribus hoc morbo laborantibus) omnino oportet ut *Epispasticum* amplum ac forte posteriori cervici applicetur, atque, porro ut *Paregoricum* è Syrupo de Meconio statim exhibeatur, repetendum singulis noctibus usque dum convaluerit; imperando interim ut æger bibat pro potu ordinario lac cum triplo aquæ coctum, et à carnis esu abstineat. Sydenham Sect: sexta. Cap. 2.

broader



broader, of a fuller red, but less uniform than those of the measles: that they continue two or three days. After they disappear and the skin is scaled off, a kind of branny scales remain, which fall off, and again appear for two or three times.

He uses no medicines, but thinks it sufficient that the patients abstain from flesh meats, and from strong liquors; that they keep within doors, but not in bed. After the desquamation of the skin is compleated, he advises a gentle purge. Thus, says he, by this plain and simple method, this disease, (if it deserves the *name* of a disease) departs without trouble or danger.

Afterwards he adds, that sometimes in children or young persons, epileptic

Requires  
no medi-  
cines.  
  
Uncom-  
mon symp-  
toms.

convulsions or coma take place in the first stage of the eruption, and then it is necessary to apply a large blister to the neck, to give a dose of diacodion, which must be occasionally repeated, and to give milk, boiled with thrice its quantity of water, for common drink.

Dover's  
account

Nearly to the same purpose is the account of DOVER, in his physician's legacy, who says, this Fever is of a very mild nature, more manageable than that of the measles, and does not stand in need of the assistance of medicine.

Appear-  
ance in  
Holland.

Equally tractable with this, is the Scarlet Fever that DE GORTER has observed in Holland. He says it chiefly prevails amongst children; that after three or four days continuation of a slight Fever, scarlet blotches appear.

That

That they remain but a short time, vanish insensibly, and leave a kind of branny scales behind them. That previous to the eruption, the patients complain of pains, anxiety, heat, and cough, but that these symptoms are never dangerous. (a)

The Scarlet Fever prevailed in London in the summer of the year 1689, with symptoms much more violent than those described by Sydenham, Dover or De Gorter ; infomuch that MORTON, <sup>Morton's account.</sup>

(a) Macularum Scarlatinus color, quæ in levi febre oboriuntur; huic morbo dedit nomen. Incipiunt plerumque in tenella ætate, tertio vel quarto die febris levioris; non diu persistunt, insensibiliter evanescunt, relictis in cute quibusdam furfuribus; in facie inchoare solent sensim latiores factæ maculæ. Reliquam etiam interdum tegunt corpus. Levis videtur biliosa corruptio calore antecedentis ætatis in tenella ætate, motu febrili ad cutem pulsa, ubi exarescens materia corpus relinquit sanum.

Hæc materia ante eruptionem oberrans, generat febrem, calorem, dolorem, anxietatem, tussim, sine periculo. *De Gorter Prax. Med. Tom. 2. pag. 196.*

Symptoms

who has transmitted us the account of it,\* calls it a kind of plague. He does not in the cases he relates, mention particularly the affection of the throat, but in the eleventh history (page 53) he notices swellings and suppurations of the parotids, producing great difficulty in swallowing, and the discharge of acrid and corrosive matter from the nose, ears and fauces; in another patient a tumour formed in the left armpit and suppurated; and a lady had an abscess formed just above the pubis which became gangrenous. He then mentions in terms of admiration how much he had observed the tonsils, the uvula, the fauces and the nostrils to have been tumefied; how greatly the lips were sometimes swelled and covered with fordid scabs and exulcerations. As what is related in this history

\* Exercitatio tertia. Cap. 5.

contains

contains the whole of his observations that approach the nearest to our disease, I shall subjoin it in his own words for the satisfaction of the reader (a). But after all, he considers the

(a) Ante sexennium mediâ æstate simul decumbebant in domo Domini Hook tres ejus filiæ, filiulus unicus, atque Domina Barnadiston ejus matertera, matrona annos septuaginta plus minûs nata. Omnes quasi veneno deleterio perculsi febre, Synochus, unum tenorem servante corripiebantur, Tussi Ferinâ, comate, deliriis, ceterisque malignitatis symptomatis haud obscuris afflicti. Ideoque natura symptomatum id exigente, Alexipharmaca mitiora exhibenda, atque epispastica applicanda jussi. Die autem morbi quarto, quinto, vel sexto, singuli scarlatinam efflorescentiam per cuticulam ubique sparsam perpetiebantur, eamque per septem, octo, vel decem dies protensam. Duæ è filiabus atque filiulus, quarto, vel quinto efflorescentiæ die parotidibus insignibus affligebantur, unde deglutitio adeo præpediebatur ut in præsens vitæ subsidium (inflammatione urgente, et forti arteriarum vibratione adhortante) venam secare et moderatâ manu sanguinem detrahare coactus essem. Alexipharmacorum autem et Vesicatoriorum ope continuatâ, glandulæ parotides (utut venæsectione earum dolor et ardor mitigarentur) debito tempore exulcerabantur, atque apostematis ruptis pus acre et corrosivum per nares, aures et fauces copiosè egerebatur, unde triginta dierum spatium sensim revalescebant. Filia autem natu secunda die tertio vel quarto efflorescentiæ immaniter vociferabatur præ dolore ingente axillam sinistram occupante. Quo circa sangui-

Scarlet



The same  
with the  
measles.

Scarlet Fever and the measles to be the same thing. He defines them as such in his synopsis februm, \* and in ano-

nem è brachio adverso detraxi ad dolorem mitigandum, ex quo dolor allevabatur. Continuatis autem remediis alexipharmacis tumor increvit, buboni non dissimilis, qui tandem exulceratus pus copiosum per plurimos dies effudit, quo demum sanato integram sanitatem formosa ac elegans puellula recuperavit. Verum Domina Barnadiston cum ad plures dies malè se habuisset, et omnem remediorum usum neglexisset, tandem post sex vel septem dies elapsos carcinomate paulo supra pubem corripiebatur, quod spatio unius vel alterius diei præ virulentia veneni per partem affectam excreti gangrænâ tentabatur. Alexipharmacis autem et epispasticis diligenter adhibitis, et auxiliis chirurgicis peritè applicatis, præter spem adstantium ab hac peste, licet difficulter admôdum evasit, atque postea ad tres annos superfuit. A *Peste* (inquam) evasit, quoniam venenum morbi prædicti, pestilentialis fermenti malignitatem adæquabat; et si quando venenum istiusmodi morbillosum crisi perfectâ per cuticulam propelli haud potest, tanquam venenum pestilentiale glandulas sponte petit narium, faucium, inguinum, &c. easque inflammat et exulcerat, nec non carcinomata, bubones et parotidas excitat. Quantum tonsillas, uvulam, fauces, nares, et quam diu intumuisse vidi! quam turgida nonnunquam labia! et quam sordidâ scabie obducta et exulcerata ab eadem causâ animadverti! ut nuperimè filiolo domini Blaney accidet, qui post efflorescentiam peractam febre, comatè, et prædicto symptomate diu affligebatur. Exercit. 3. Cap. 5. p. 53, 54.

\* Exercitatio prima. Cap. 2. p. 41.

ther place observes (a) that notwithstanding this disease has from the general concurrence of physicians obtained a particular name, yet he thinks it to be altogether the same as the measles, differing only in the mode of the eruption; the former being a continued inflammation or redness equally diffused over the whole cuticle, the latter existing in the form of distinct, oblong or angular blotches. (b)

So long ago as the beginning of the seventeenth century, SENNERTUS, phy-

(a) Hunc morbum (utut universali medicorum consensu titulo peculiari donetur) prorsus eundem esse cum morbillis censeo, et solo efflorescentiæ modo ab illis distare, &c. *Cap. 5. p. 43.*

(b) Efflorescentiam hanc, interstitiis figurâ diversâ, oblongâ scilicet quadratâ, vel multangulâ præditis variegatam observare est: namque non unâ continuatâ inflammatione seu rubedine, ut in febre scarlatinâ, perfunditur cuticula. Quo criterio duntaxat hæc efflorescentia ab altera quæ febrem scarlatinam comitatur dignoscenda est. *Cap. 3. p. 17.*

fician

fician to the Elector of Saxony, observed the Scarlet Fever in its more  
 In Saxony. malignant form, and has given us a pretty good description of it in his chapter upon the small-pox and measles. † After speaking of the latter he says, that there is yet another variety which he has sometimes, but not very frequently, observed, and that he is in doubt by what name to distinguish it, (a)

† Sennertus de febris. Lib. 4. cap. 5.

(a) Præter has differentias adhuc alia est, sed rarior quidem, quam aliquoties observavi, quo nomine tamen ab aliis discernere, hæcenus dubius fui. Etsi enim instar erysipelatis totum ferè corpus prehendat; tamen non vidi quod adultos, quod in erysipelate fieri ferè solet, sed infantes solum corripit. Malo ergo ad morbillos referre. - - - - - Maculæ rubræ et quasi ignitæ cum vix effatu digno tumore per universum corpus quasi quædam parva erysipelata erumpunt in principio, seu morbi die quarto vel quinto. In statu verò universum corpus rubrum et quasi ignitum apparet, ac si universali erysipelate laboraret. In declinatione rubor ille imminui, et maculæ rubræ latæ, ut in principio iterum apparent, quæ tandem septimo vel nono die evanescunt. epidermide squamarum instar decedente. malum verò hoc grave ac periculosum et sæpe lethale est. Nam calor est ferventissimus, sitis inextinguibilis, et ple-

for although it occupies the whole body like an erysipelas, yet the erysipelas chiefly seizes upon adults, but this disease attacks children only, therefore he rather chooses to refer it to the measles. He then describes it in words to the following effect. “ Upon the Symptoms.  
 “ fourth or fifth day of the disease, red  
 “ fiery blotches appear over the whole  
 “ body, but without any remarkable  
 “ swelling. In the height of the disease  
 “ this fiery redness occupies the whole  
 “ surface not unlike an universal erysipelas. In the decline, the general redness  
 “ abates, and broad red blotches again

rumque pulmonum (unde tusses excitantur) faucium et aliorum viscerum inflammationes, deliria et alia mala urgent. In declinatione tandem materia ad articulos extremorum transfertur, ac dolorem et ruborem, ut in arthriticis excitat. Cutis squamarum instar decidit, mox pedes ad talos et suras usque intumescunt, hypochondria læduntur, respiratio difficilior redditur, tandemque abdomen intumescit, ægrique non sine magno labore, et post longum tempus pristinae sanitati restituuntur, sæpe etiam moriuntur. Sennertus. lib. 4. Cap. 12. p. 190, 191.

“ appear

“ appear as in the beginning. These  
“ at length fade upon the seventh or  
“ ninth day, and the skin peels off.  
“ This disease is severe, dangerous and  
“ frequently fatal; for the heat is ex-  
“ treme, the thirst inextinguishable,  
“ and accompanied in most cases with  
“ delirium, inflammation of the fauces,  
“ of the lungs, and of other viscera. In  
“ the decline of the fever, the matter  
“ is transferred to the joints of the ex-  
“ tremities, and there excites redness  
“ and pain resembling the gout. The  
“ skin falls off in scales, and presently  
“ afterwards the feet and legs swell, the  
“ hypochondres are affected, the res-  
“ piration is rendered more difficult,  
“ and at length the belly swells. These  
“ patients require great care and a  
“ length of time to recover their for-  
“ mer health; but they often die.”

Conse-  
quences.



SCHULTZIUS describes the scarlet fever and fore throat under the name of *purpura epidemia maligna* as it appeared in Poland in the spring of the year 1664.\* He remarks, “That the winter was “mild and rainy, (a) that the disease “appeared early in the spring and continued to rage through the whole Season.

\* *Miscellanea naturæ curiosorum. Annus 6. 7. Obs. 145. p. 206.*

(a) Cum anno 1664 hyems mollis et pluviosa esset, grassabatur apud nos vere primo insequente purpura epidemia maligna, quæ per totam æstatem et autumnum usque in hyemem sæviebat, plurimosque infantes utriusque sexus, et duodecim annum attingentes (nam ultra hanc ætatem vix ascendebat) perimebat. Plerique secundâ die morbi, nonnulli etiam primâ moriebantur; illi solummodò evadebant, qui nulla faucium inflammatione vel tumore œdematoso (variabant enim ista pro diversitate naturarum) infestabantur. Tum omnibus ab isto morbo liberatis, post copiosum sudorem (nonnullis etiam diarrhœa, sed tantum unius vel alterius diei critica profuit) squamæ decidebant, rubore cutis evanescente. Tandem, præsertim natu majoribus, tumor totius corporis, instar leucophlegmatix, et infimi ventris sequebatur, qui per aliquot septimanas miseris molestus erat, sudoreque etiam solvebatur, interdum etiam urinâ largius profluente.

---*Miscell. Nat. cur. ann. 6. 7. p. 206.*

“summer

“ summer and autumn, even to the  
 “ winter following. That it proved  
 “ fatal to a great number of children  
 “ of each sex, but hardly affected any  
 “ that were beyond twelve years of age.”

He says, “ they mostly died upon  
 “ the second day; some upon the first.

Symptoms. “ Those only survived who had no in-  
 “ flammation in the throat and no  
 “ œdematous tumour. In those who  
 “ recovered, after a copious sweat, the  
 “ redness of the skin vanished, and a  
 “ desquamation followed. In some a  
 “ diarrhœa of one or two days conti-  
 “ nuance proved critical. After some  
 “ time, especially in the older patients,  
 Dropsy. “ the whole body was affected with a  
 “ swelling like the leucophlegmacy; the  
 “ belly likewise swelled. These symp-  
 “ toms continued very troublesome for  
 “ several weeks; they were carried off  
 “ by

“ by sweating, and sometimes by a  
 “ plentiful flow of urine.”

In the medical transactions of Berlin, Decad. i. vol. pag. 20, we find our disease tolerably well characterised in a few words. (a)

“ In the Scarlet Fever the patients  
 “ are attacked with shiverings, head-  
 “ ache, nausea ; and a vomiting ge-  
 “ nerally succeeds. The efflorescence,  
 “ which is preceded by an elevation of  
 “ the papillæ of the skin occasioning a  
 “ roughness, gradually appears upon  
 “ the fourth or fifth day, extending it-  
 “ self over every part of the body, and  
 “ accompanied with a degree of intu-

As it ap-  
 peared at  
 Berlin.

(a) Invasit febris scarlatina patientes cum rigoribus, cephalalgia, et cardiaca nausea, quam excipiunt, communiter vomitus: efflorescit quarto vel quinto die sensim atque sensim, post præcedaneam asperam papillarum cutanearum elevationem, rubedine per universum corpus a capite usque ad calcem, cum cutis aliquali intumescencia,

“ mescence, so that the outward ap-  
 “ pearance of the patient resembles a  
 “ lobster boiled. This red colour  
 “ spreads over all the limbs, the cor-  
 “ ners of the eyes, and the inside of  
 “ the nostrils. - - - - -

- - - - - “ About the seventh day,  
 “ but without any previous sweat, the  
 “ intense colour abates, the skin be-  
 “ gins to peel off, and then it is,  
 “ whilst the disease seems to be upon  
 “ the decline, that the patients are en-  
 “ dangered from congestions about the  
 “ fauces accompanied with aphthous  
 “ inflammation.”

*ita ut patientum externus aspectus, referat ideam cœci  
 cancri. Ista rubedo interiora narium, limbosque et angu-  
 los oculorum obducit* - - - - -

- - - - - *versum septimum diem, sine  
 sudoribus, rubor iste fit remissior, cuticulaque inchoat  
 desquamari, et tunc maxime, dum morbus declinare vi-  
 detur, fauces aphthodeo-inflammatoria congestione peri-  
 clitantur.*—*Acta Med. Berol. Decad. i. vol. p. 20. & seq.*

NAVIER



NAVIER published a letter upon the Epidemic diseases of the year 1753, in which he has recorded a history of the Scarlet Fever and Sore Throat corresponding much nearer to our disease than any account which we have yet examined.\*

He sets out with observing (a) that Navier's account.  
 “ when the air grew colder, the small-  
 “ pox almost entirely ceased; upon a  
 “ warmer air again prevailing, another  
 “ epidemic disease appeared, far more  
 “ inflammatory in its nature than the  
 “ small-pox, viz. the red or Scarlet Fe-  
 “ ver. This disease begins with a

\* See Plenciz Tractatus de Scarlatina. See also Commentaria de rebus. Part 1. vol. 4. p. 338. The original is published in French, but we have taken the Latin translation as given by Plenciz.

(a) Variolis tandem a mediocri orto frigore fere penitus extinctis, tempestate dein paulo mitius facta, alius apparuit epidemicus morbus, variolis longe magis inflammatorius, febris nimirum rubra, scarlatina dicta. Hic



“ most violent Fever, accompanied with  
 “ faintings, great weariness, pains of  
 “ the head and throat, and a difficulty  
 “ in swallowing.

“ On the second day, but frequently  
 “ in twenty-four or thirty hours, large  
 “ red spots, mostly larger than ones  
 “ hand, of a bright scarlet colour,  
 “ and irregular in their figure, appear  
 “ all over the body, covering the  
 “ back, the breast, the thighs and the  
 “ haunches so completely, that they  
 “ are of one continued scarlet colour.  
 “ These spots are disappearing almost

*morbus per febrem admodum vehementem se manifesta-  
 vit, quæ animi deliquiis, lassitudinibus spontaneis, capi-  
 tis fauciumque doloribus deglutitionem impredientibus,  
 comitata erat.*

*Secundo die, et sæpe post viginti quatuor vel triginta  
 horas in toto corpore maculæ rubræ, vivido scarlatino  
 colore, largæ, manus magnitudinem sæpe excedentes,  
 figuræ irregularis, et dorsum, pectus, femora et nates  
 sæpe ita tegentes, ut unica tantum esse videretur, ap-  
 paruerunt. Hæ maculæ quovis fere momento disparen-*

“ every

“ every moment, and like an erysipelas  
 “ again appearing in places that they  
 “ did not occupy before. They feel of  
 “ a sharp biting heat, especially in  
 “ adults ; and though so extremely  
 “ red, when pressed by the finger turn  
 “ white, but the pressure being re-  
 “ moved they become red again.

“ The pulse is quick and small, the  
 “ respiration for the most part diffi-  
 “ cult, interrupted, and sobbing. The  
 “ breath so hot and burning that who-  
 “ ever feels it is obliged to turn away  
 “ their face from the patient. Some-

tes, se in alia loca erysipelatis more conferre videbantur,  
 in quibus antea non fuerant. Manus easdem tangens,  
 calorem vividam et ardentem præcipue in adultis sentie-  
 bat, et cutis ruberrima digito compressa albescens, remo-  
 to digito rursus rufescebat.

Pulsus parvus et frequens erat, et respiratio difficilis  
 et intercepta et singultuosa in plurimis esse videbatur.  
 Halituosus vapor e pulmonibus egrediens adeo calidus et  
 urens deprehendebatur, ut unusquisque hunc percipiens,  
 faciem ab ægro statim avertere cogeretur. Hæc febris,

“ times the hands and arms are  
“ swollen.

“ This Fever attacks whole families  
“ either altogether or successively.”

Dropfical  
appear-  
ances.

Navier observes, that he has seen this disease in young children followed by a prodigious leucophlegmacy. In one case the leucophlegmacy affected even the eyelids ; the urine was brown and very small in quantity, as was not unusual ; indeed it sometimes appeared bloody. This patient was cured by the application of blisters, after other necessary steps had been taken.

etiam interdum cum manuum et brachiorum inflatione conjuncta fuit, integrasque familias, aut insimul, aut successive invasit---Vidit Cl. Auctor infantes hoc morbo laborantes, quibus prodigiosa leucophlegmatia supervenit. Quidam hac febre laborans et usque ad palpebras leucophlegmaticus, parcissimam brunam urinam reddens, qualem in hac febre sæpissime, imo interdum sanguinolentem secedere asserit Cl. Auctor, præmissis præmittendis ab omnibus symptomatibus vesicatorium applicatione, liberatus fuit.

In some he says the belly is distended, and the tongue very dry, but in general it is sufficiently moist.

“ In those who recover, the skin scales <sup>Desqua-</sup>  
 “ off upon the fifth or sixth day, and <sup>mation.</sup>  
 “ one youth thirteen or fourteen years  
 “ of age lost the cuticle from his hands  
 “ and feet entire, excepting only the  
 “ nails.” - - - - He proceeds to ob-  
 serve that “ unless the patient is re-  
 “ lieved at the first attack of the dis-  
 “ ease, gangrenous eschars appear at  
 “ the bottom of the fauces towards the  
 “ velum pendulum palati, and when

Quidem ventrem flatibus distentum, et linguam valde ficcā, plurimi vero humidam habent. Iis qui emergunt, epidermis, quinto vel sexto die per squamas decedit, quinimo adolescenti tredecim vel quatuordecim annorum tota manus pedisque cuticula, exceptis unguibus, decedit. - - - - Nisi ægro statim in primo morbi impetu succurratur, escharæ gangrænosæ in fundo faucium versus arcus et velum palati superveniant, et hisce oris



“ this is the case, few recover. This  
 “ gangrene frequently seizes upon the  
 “ œsophagus and the windpipe before  
 “ we perceive or endeavour to prevent  
 “ it. - - - Some patients die upon  
 “ the fourth or the fifth day, with the  
 “ symptoms of suffocation from a gan-  
 “ grenous inflammation of the lungs.  
 “ Others who die violently delirious,  
 “ discharge a large quantity of sanies  
 “ from the mouth and nostrils, and the  
 “ scarlet blotches after death sometimes  
 “ change to a violet colour. These  
 “ symptoms in young children are far

pauci emergunt. Hæc gangræna œsophagum asperam-  
 que arteriam sæpe ante occupat, quam illam percipere,  
 illique medere queamus. - - -

- - - Quidam ac febre rubra affecti quarto, vel  
 quinto die eodem modo pereunt, ac si per inflammati-  
 onem gangrænosam pulmonum suffocati essent. Alii  
 post vehemens delirium morientes, magnam saniei quan-  
 titatem per os et nares reddunt, et rubræ antea maculæ,  
 post mortem in quibusdam prorsus violaceæ conspiciun-  
 tur. Hæc symptomata vero in infantibus longe minus  
 violentia sunt, remediisque facile cedunt. - - -

“ less



“ less violent, and easily yield to re-  
 “ medies.

In another place Navier says, “ it is  
 “ not unusual for young children to  
 “ have a severe cough before the at-  
 “ tack of the Fever; which becomes  
 “ less troublesome when the Fever  
 “ comes on, and ceases along with it.

SAUVAGE in his *Nosologia Methodi-*  
*ca* \*, amongst other species of the <sup>At Mont-</sup>  
*SCARLATINA*, mentions the *SCARLATINA* <sup>pelier.</sup>  
*ANGINOSA* of the year 1765. This  
 seems to agree very well with our dis-  
 ease. He says that (a) “ in the sum-

- - - - - Infantes, hac febre Scarlatina de-  
 cumbentes, ordinariè ante febrem tussi ferina laborarunt,  
 quæ vero cum febre sese imminuit, et cum illa quoque  
 cyanuit. D. de Navier. In Comment. de rebus. Pars  
 prima. Vol. 4. p. 338. Vide etiam Plenciz Tract. de  
 Scarlatina.

\*P. 454, Quarto edition.

(a) Hac æstate Mompelii viget apud infantes scarlati-  
 na, in qua totus truncus intense rubet cum voce rauca,  
 et angina ulcerosa, imò in quibusdam gangrænosa. Sau-  
 vage Nosol. Meth. Class. 3. G.8. Sp. 6.

“ mer

“mer of that year, a Scarlet Fever pre-  
 “vailed at Montpelier amongst young  
 “children. The whole body was in-  
 “tensely red, the voice hoarse, the  
 “throat ulcerated, sometimes gan-  
 “grenous.”

Plenciz  
 account

PLENCIZ a physician at Vienna, in his *Tractatus de Scarlatina* has added something to the history of the disease. He is the first author that mentions the appearance of white blisters when the desquamation of the skin takes place, and he gives us the best account extant of the dropical state that succeeds. He thinks the danger of the patients is greater from the dropy than from the scarlet fever, but that was not the case with us. He takes some pains to investigate the cause of the disease, and is much more diffuse upon the method of cure than any of his predecessors :

but

but these things will come to be noticed in their proper place.

From the description of this disease as it existed at Birmingham, and from the accounts transmitted to us by other authors, the reader will I hope be enabled to attain a pretty accurate knowledge of it, notwithstanding its multifarious appearances. It only remains, in order to perfect the history, to relate the appearances found in the body <sup>Dissection</sup> after death, but this I have not been able to accomplish, nor do I know of any one that has. The only examination that I find upon record is that made by DORINGIUS (*a*) a friend to SENNERTUS. He relates the case of a boy that survived the first attack of fever, but afterwards “ had swelled feet,

(*a*) Ita observavit Cl. D. M. Doringius, ut literis ad me datis scripsit, puerum quendam Uratissaviæ post hunc morbum pedibus, cruribus, scroto, ventro ac facie intu-

“ legs,

## OF THE SCARLET FEVER

“ legs, scrotum, belly and face ; a flush-  
 “ ing in his cheeks, an irregular fever,  
 “ a cough attended with a frothy pitu-  
 “ itous expectoration, and great diffi-  
 “ culty in breathing. Seven days be-  
 “ fore his death, after most laborious  
 “ and rattling breathing, with a sense  
 “ of oppression at his chest, upon the  
 “ breaking of an abscess he coughed up  
 “ pus and black blood. Seven days  
 “ afterwards being attacked again with  
 “ similar symptoms, he died.

“ Upon opening the body the whole  
 “ cavity of the chest was filled with yel-  
 “ low water ; both lobes of the lungs

muisse, cum genarum nonnulla ac perpetuoque rubore,  
 febricula irregulari, tussique paucâ, eaque spumosa saltem  
 et pituitosa rejiciebat, difficultate respirandi summa. Hic  
 septimo die antequam moreretur, post summam respiran-  
 di difficultatem, ponderis sensum circa pectus, ac sterto-  
 rem, pulmonis abscessu rupto pus et sanguinem atrum  
 tussi rejecit, et huic septimo ab illo paroxysmo die, cum  
 eadem symptomata redirent, mortuus est. Corpore a-  
 perto, tota pectoris cavitas aqua citrina repleta, pulmo-

“ were



“ were livid and gangrenous ; a large  
 “ abscess was found in the left. The ca-  
 “ vity of the abdomen was filled with  
 “ a similar watery fluid. The omentum  
 “ nearly wasted. The liver pale in  
 “ colour, and in proportion to the sub-  
 “ ject, of an amazing size.”

nesque ambo toti lividi et gangrænosi conspiciebantur,  
 et sinister magnum intus abscessum fovebat. Abdomine a-  
 perto innatabant intestina tota simili aqua: omentum  
 prope consumptum videbatur. Hepar quod pro indivi-  
 duum ratione portentosæ fuit magnitudinis, sub-pallidum.

Sennertus Lib. 4. Cap. 12, p. 191. Edit. 1650





*Of the diagnostick Symptoms.*

**T**HE Scarlet Fever and Sore Throat is so nearly related to some other fevers, that it is not always easy to distinguish them without having an eye to the prevailing epidemic of the season. An attempt therefore to point out the characteristic differences cannot be unacceptable.

Petechial  
fevers.

In fevers of the *Petechial* kind the eruption seldom appears before the fourth day; it consists of distinct spots, regular in their form, and principally occupying the neck, the back and the loins. But in the *Scarlet* Fever the eruption generally appears about the third day; consists either of broad blotches or  
else

else one continued redness, which spreads over the face and the whole body.

In the fever called *Purpura* the pustules <sup>Purple  
Fever.</sup> are prominent, keep their colour under pressure, and never appear early in the disease. Whereas in the Scarlet Fever the eruption appears early after the attack, is not prominent, but perfectly smooth to the touch, and becomes quite white under pressure. These diseases are certainly distinct in themselves, and not mere modifications in the eruption only; though they seem connected by some general cause, for we had several examples of the true *Purpura* at the time the *Scarlatina* prevailed; but I know a gentleman who first had the *Scarlatina*, and shortly afterwards the *Purpura*: now I never yet have seen an instance of the same person having the Scarlet Fever twice, and I believe it to be

be as great an improbability as a repetition of the small-pox.

Measles:

The *Measles* are so nearly allied to the Scarlet Fever, that we find some of the best medical writers considering the diseases as no way differing, but in the mode of the eruption; the former rising above the skin, and limited in their extent, the latter smooth and universally diffused. But not to mention that the patients who had gone through the measles were equally subject with others to the Scarlatina, we may observe that the cough, the running at the nose, the watery eye; symptoms so predominant in the early state of the former, are never found to exist in the latter. I confess to have met with one case of the Scarlatina in which a troublesome cough arose upon the seventh day, and disappeared on the tenth, but

but in the measles it is a leading symptom, and continues not only during the eruption, but commonly for many days afterward.

The *Erysipelas* may in many circumstances vie with the *Scarlatina*, but the limited seat of the former, together with its not being contagious, at least in our climate, is sufficient to distinguish it from the latter. We may likewise take into the account, that in the most frequent species of the *erysipelas* there is a constant oozing of an acrid watery fluid from the inflamed parts, which is never the case in the *Scarlatina*.

In addition to the above distinctions, we may remark, that the *Sore Throat*, one of the symptoms most observable in our epidemic, is either almost or al-

D

together



together wanting in these congenial diseases.

Ulcerated  
Sore  
Throat.

There is yet another disease so much resembling our epidemic in many of its leading symptoms, that I acknowledge it is not an easy task to distinguish them; and yet the distinction is a matter of the greatest importance, as the method of treatment ought to be extremely different. The reader will readily guess that I allude to the *Angina Gangrænosæ* or *ulcerated Sore Throat*. They are both epidemic, they are both contagious: the mode of seizure, the first appearances in the throat, are nearly the same in both; a red efflorescence upon the skin, a great tendency to delirium and a frequent, small, unsteady pulse, are likewise common to both—with features so strikingly alike, and those too of the most obvious

Great resemblance.



obvious kind, is it to be wondered that many practitioners considered them as the same disease? that others though sensible of some little differences, still concluded them to be of the same nature; both putrid, and both demanding a similar mode of treatment? those who can answer these questions in the affirmative, must feel themselves possessed of greater penetration than I can boast of.

But though the resemblance may at first sight betray us into error, the attentive practitioner will not long be satisfied with a mode of treatment in which the noblest medicines fail of their usual effects: he will meet with cases in which the dissimilarity is sufficiently obvious: he will soon attain a discrimination adequate to every useful purpose: but perhaps he will

never be able precisely to draw the line where the light begins and where the penumbra ends.

DOCTOR FOTHERGILL, by his excellent account of the *Sore Throat attended with ulcers*, has furnished us with the means of drawing such a comparative view of the two diseases, as will I hope in a great measure obviate the possibility of mistaking them. For the ease of the reader it will be convenient to contrast them in a tabular form.

*Scarlatina*

*Scarlatina Anginosa.**Season.* Summer--autumn.*Air.* Hot---dry.*Places.* High---dry---gravelly.*Subjects.* Vigorous---both sexes alike---robust in most danger.*Skin.* Full scarlet---smooth---if pimply the pimples white at the top---always dry and hot.*Eyes.* Shining, equable, intense redness---rarely watery.*Throat.* In summer, tonsils, &c. little tumefied---no sloughs---in autumn more swelled---integuments separating---sloughs white.*Breath.* Very hot, but not foetid.*Voice.* In summer natural.*Bowels.* Regular at the accession.*Blood.* Buffy---firm.*Termination.* The 3d, 5th, 8th, or 11th day.*Nature.* Inflammatory.*Angina Gangrænosa.**Season.* Spring---winter.*Air.* Warm---moist.*Places.* Close---low---damp---marshy.*Subjects.* Delicate---women and female children---robust adults not in danger.*Skin.* Red tinge---pimply---the pimples redder than the interstices---bedewed with sweat towards morn.*Eyes.* Inflamed and watery, or sunk and dead.*Throat.* Tonsils, &c. considerably swelled and ulcerated---sloughs dark brown.*Breath.* Offensive to the patients and their assistants.*Voice.* Flat and rattling.*Bowels.* Purging at the accession.*Blood.* Florid---tender.*Termination.* No stated period.*Nature.* Putrid.

It is not pretended that all the above contrasted symptoms will be met with in every case; it is enough if some of them appear, and that if conjoined with the consideration of the prevailing constitution, they will enable us to direct that mode of proceeding which will most contribute to the relief of the sick.

Second  
contagion

Perhaps one other circumstance may assist us in forming an opinion of the disease. It is well known that those who have once had the ulcerated sore throat, are more liable than others to be attacked by it again; but I am persuaded that a person may as soon have the measles or small-pox a second time as the Scarlet Fever and Sore Throat. However the succession of these diseases is not incompatible; for I attended the children of one family who had the ulcerated Sore Throat in May, and the Scarlet Fever and Sore Throat in the August following.

; blood has the greatest share; blood is the

and blood is the most common cause of the

Of the Causes of the Scarlet Fever and

and the Sore Throat.

and the Sore Throat.

and the Sore Throat.

**H**OW far the appearance of this General  
causes.

disease depends upon the consti-

tution of the air, how far upon the

temperature of our bodies influenced

by the productions of the seasons, and

how far again upon the concomitant

existence of other diseases, are matters

that nothing but the experience of ages

can determine. SCHULZIUS observes †,

that the winter of the year 1664, in

Poland, was mild and rainy; the *Scar-*

*latina Anginosa* appeared early in the

following spring, and raged all summer Seasons.

and autumn, even until the winter follow-

ing. The last winter with us was uncom-

† Loco citato.



monly mild ; the spring dry and cold ; the summer dry, and remarkably hot. In October the air was unusually cold. November was a wet month ; the first week cold, the middle of the month warm. The disease began in May ; it raged with great violence in June, July, and August ; in September the scarlet colour was less intense, and in October the skin was frequently not at all affected, but the Fever in other respects nearly the same, and the complaints in the throat greatly augmented. In the warm weeks of November, the scarlet colour was more frequent again.----During the months of September, October, and November, the instances of the disease in the town of Birmingham were fewer than in the four preceding months ; but during the former part of that period, all the towns and villages in the neighbourhood,

bourhood, and many separate houses, in high, dry, gravelly situations suffered greatly; whilst the inhabitants of wet, low, or sheltered places, either knew not the disease at all, or if they did, it was only in its mildest form.---

Situations

The product of vegetable substances this year was great; indeed it was universally allowed that the crops of almost every kind were greater than they had been for many years past.---It has been already remarked, that the small-pox, the measles, the whooping cough, were with us the concomitants of the Scarlet Fever, and that it was preceded in the winter and spring by the ulcerated Sore Throat. NAVIER too remarks \* that it succeeded to the small-pox; and MORTON observed it to prevail together with the measles.

Diet.

Other diseases.

\* Loco citato.

Morton's  
opinion.

As to the immediate cause of this disease, those who are best acquainted with the present imperfect state of knowledge are the least likely to expect a satisfactory answer to such an enquiry. MORTON says (a) “it is a  
“poison defiling the animal spirits,  
“whose malignity does not only over-  
“whelm the spirits in its first attack,  
“but breaks down the mass of blood  
“by agitation, into an acrid colluvies,  
“more powerfully than any other  
“ferment.”----

NAVIER (b) thinks the cause of the *Scarlatina Anginosa* is something acrid,

(a) *Causa morbillorum continens seu immediata est Venenum spiritus inquinans, quod non tantum in primo morbi stadio malignitate sua spiritus obruit, sed massam sanguinis agitando eam in colluviem acrem, præ cæteris omnibus fermentis colliquefacit. Loc. citat.*

(b) *Causam hujus morbi non solum cum illa, quæ sudorem anglicam, aphtham gangrænosam, dysenteriam,*

caustic

caustic and putrefactive, like that of the measles. He believes that a similar cause produces the sweating sickness, the gangrenous aphthæ, the dysentery; and that it is analogous to the distemper amongst the cattle. He endeavours to support this last opinion by observing that when the cattle recover they lose their hair, and their skin peels off: when they die, the viscera are always more or less in a gangrenous state. Hence he concludes, that our disease was communicated by contagion from cattle to mankind. He

Navier's  
opinion.

&c. excitavit, eandem esse dicit, sed in miasmate, quod cum morbilloso comparat, acri caustica et putrefaciente consistere ipsumque morbum analogiam alere perhibet cum morbo epidemico pecorum. His enim convalescentibus pili et epidermis eodem modo deciderunt, ac hominibus cuticula, et in cadaveribus pecorum apertis semper viscera quædam gangrænosa invenit Cl. Auctor.

Ex pecorum igitur morbo hanc febrem per contagium ortum esse arbitratur, eandemque cum variolis ideoque convenire asserit, quia magnus infantum numerus eandem brevi ante vel post variolas habuerit.

Plenciz tractat.

thinks



thinks too it is some how connected with the small-pox, because a great number of children had it a little before or a little after the small-pox.

Plenciz  
opinion.

PLENCIZ \* attributes the effects to certain animated feminal particles, *Semina animata*, which he thinks are capable of multiplying their kind. He supposes they may be wafted by the winds to considerable distances, or that they may sometimes lie dormant a long time in the body; and thus he accounts for the production of the disease, when it did not previously exist in the neighbourhood.

But whether the disease is caused by animalcula capable of generating their kind, or by certain miasmata which have the property of assimilating other

\* Tract. de Scarlat. p. 64---68.

particles



particles of matter to their own nature, by some mode of fermentation hitherto but little understood, there can be no doubt but it is contagious, and per- Contagious haps so in a degree nearly equal to the small-pox and measles.

I have repeatedly had occasion to observe, that it is upon the third or fourth day after exposure to the contagion, that the patients begin to complain. Its first effect is evidently that First effect. of a poison of the sedative kind acting upon the nervous system. Its first seat seems to be the pituitary or *Schneiderian* membrane, every part of which it presently pervades, passing from thence down the œsophagus to the stomach, down the larynx to the lungs, along the *Eustachian* tubes to the ears, from the nose to the eyes and to the brain itself.

Scarlet colour.

The redness of the skin does not necessarily signify a determination of the poison to the surface of the body; because we know instances of a similar effect being almost instantaneously produced by certain affections of the stomach. How many people after eating muscles\* have we not heard of, that have experienced great anxiety, presently followed by a general redness upon the skin; and which again was as soon removed by the exhibition of a vomit to discharge the poisonous cause! Who has not observed the full scarlet flush upon the face after eating herrings, or vinegar; after drinking acetous beer or cyder? Can any body suppose that in the one case the offending matter is instantly conveyed to the skin? or that in the other it is carried from thence instantane-

Affection of the stomach.

\* *Mytilus edulis*. LINN.

ously as the contents of the stomach are evacuated?

I know a young lady to whose constitution oatmeal is so completely poisonous, that in a few minutes after swallowing the smallest quantity, a general scarlet colour, accompanied by a sensible tumefaction, takes place upon the skin; and I know a gentleman who has frequently experienced similar effects from eating sweet almonds.

I shall only add further upon this subject, that the effects of acids just now mentioned like those ascribed to the miasmata of the *Scarlatina Anginosa*, are by far the most remarkable in hot weather.

At the time when the disease prevailed here in its fullest force, and every one was alarmed for himself and his connections,

Prophy-  
lactics.

nections, the best preventive method was anxiously enquired after. Some smoked, some chewed, and others snuffed tobacco: some daubed their hands and faces with *thieves vinegar*; many wore camphor at the pit of the stomach, and still more swallowed bark and Port wine. But those who were much conversant with the disease, had too ample occasion to observe that none of these methods were effectual. Would it not be as reasonable to expect that we shall find a substance capable of destroying the activity of the small-pox matter, as that we can hope for one which shall prove a prophylactic to the Scarlet Fever and Sore Throat?

However vain our hopes may be, built upon such a foundation, yet if my conjectures are true, that the poison first makes its lodgement upon the mucus separated



separated by the pituitary membrane lining the nose and fauces, it will be of some consequence to those who from their attendance upon the sick are necessarily exposed to the infection, to hawk up and spit out frequently the mucus that collects in the fauces, and likewise to promote the discharge of that which lodges in the nostrils.

From the same consideration I am led to advise those who having already imbibed the poison, are seized with the first symptoms of the disease, immediately to take an emetic; frequently to wash their fauces with soap-leys diluted with water; and to snuff something up the nose that will make them sneeze. The first and last of these indications are sufficiently obvious; and the other is founded upon the facility with which the caustic fixed alkaly dissolves mucus,



and the quality it has of destroying all the peculiar properties of animal matter. If these precautions are attended to, I can venture to assert, from a pretty large experience, that the infection will either be altogether prevented, or else very trifling in its consequences. After the operation of the emetic, I generally direct the patient to go to bed, and drink plentifully of wine whey with spirits of hartshorn.



*Method of CURE.*

**A**MONGST the multiplicity of medical writers, only a few have favoured us with a description of the *Scarlet Fever and Sore Throat*; and fewer still with the method of cure.

MORTON, considering this and the measles to be the same disease, directs the practice to be the same in both; and in this he is a much better guide than those who have written more expressly upon the subject. I can believe that the constitutions of the natives in different parts of Europe, will allow of a considerable difference in the method of treatment; but I am persuaded that those who practice in England with

success, will find more occasions to depart from, than to concur with the methods advised by the French and German authors.

Instead of tracing the progressional steps of the disease over again, and pointing out the plan of treatment in every different stage of its course, and under the variously different appearances which it is so ready to adopt ; I believe it will be the shorter way to consider the different remedies as they occur, and to point out how far I have found them in real practice to be useful or detrimental ; and afterwards to subjoin a few cases, the better to illustrate the mode of application.

But preparatory to this, I must beg the attention of the reader to a few principles, which did not derive their  
origin

origin from any preconceived theory, nor from any predisposition to particular opinions, but from actual observation; and as such I offer them as matters of fact; under a full persuasion that those, who after an attentive consideration of the disease, appear to differ from me in opinion, will in reality find that difference to consist more in words than in sentiments.

1. The immediate cause of this disease, is a poison of a peculiar kind, communicable by contagion.
2. This poison first takes possession of the mucous membrane lining the fauces and the nose, and either by its action upon the secretory glands, or upon the mucus itself, assimilates that mucus to its own nature.

3. That it is from this beginning, and from this only, that it spreads to the stomach, &c. and at length acts upon the system at large.
4. That its first action upon the nerves, is that of a sedative or debilitating power.
5. That in consequence of certain laws of the nervous system, when the debilitating effects operate upon the *Sensorium commune*, a reaction takes place; and that this reaction is, *cæteris paribus*, proportioned to the debilitating power.
6. That in consequence of this reaction of the nervous system, the vibratory motion of the capillary blood-vessels dependant thereon, is  
greatly



greatly increased, an unusually large quantity of blood is accumulated in those vessels; the heart and large arteries are deprived of their customary proportion; and hence, though stimulated to more frequent contraction, the pulse must necessarily be feeble.

7. Violent exertions are followed by debility. Upon the cessation of the fever, the capillary vessels which had acted with such unusual violence, are left in a state of extreme debility, and are long in recovering their tone; hence it is that so many patients afterwards become dropical.----

If these positions are true, they will enable us to direct our practice with a tolerable degree of certainty; they

will point out the way to further Improvements, and they will assist us in judging of the probable success of methods which have been advised, but which we dare not adopt. Of this kind is

**BLOOD-LETTING.** Plenciz and Navier advise us to use the lancet. The former in more general practice, but the latter confines it to cases wherein the inflammatory symptoms run very high. (a) He directs to bleed in the arm, but in case of delirium or coma, to open the jugular vein.

Bleeding.

Our own countryman Morton, says we should not bleed without evident reason.

(a) Venesection interdum ob vehementiam inflammationis summe necessaria est. Præfert vero venesectionem in brachio, illam enim in pede institutam, varia sæpius exceperunt incommoda, in primis si viscera, quod sæpissime fieri asserit, inflammatione quodam affecta fuerunt. In delirio vero vel comate, jugularem quoque secare curavit. Navier, Comment. de rebus, &c. Pars 1. vol. 4. p. 340.

Indeed

Indeed such was the state of the pulse with us during the summer months, that I never saw a case in which blood was taken away : nor would it be easy to conceive with what view the boldest, or the most ignorant practitioner would have dared to attempt it ; for in those cases where the inflammation upon the surface is very great, the loss of blood can only contribute to the further depletion of the larger vessels, and thereby increase the debility and faintness which already exist in a most alarming degree ; for the small vessels accumulating the blood more in consequence of their own action, than from the pulse of the heart, would not be affected by the usual mode of blood-letting ; and the extent of the inflammation is much too great to allow us to have recourse to topical bleedings.

Sometimes

Sometimes where the fiery redness of the eyes and the state of delirium seemed to demand the application of leeches to the temples, I have seen them applied ; but never with any good effect. In one instance where the constant rejection of every thing that was swallowed, even simple water, and the pain in the stomach during the efforts, seemed to indicate an inflammation in that organ, blood was taken away, notwithstanding the feebleness of the pulse. The blood was fizy. The bleeding was repeated ; but no very evident advantage accrued to the patient. I think therefore we may conclude that when the scarlet colour upon the skin is intense, we cannot expect to benefit either from topical or general bleedings.



In the autumn when the scarlet colour of the skin was seldom very intense, and often did not appear at all, the tumefaction of the fauces, was generally much greater, and the pulse considerably more firm. In this case, if the patient was threatened with suffocation, if violent head-ache, or if peripneumonic symptoms pointed out the expediency of blood-letting, it was sometimes done; but still with less advantage than one would have expected in almost any other situation; and similar symptoms in other patients were much more effectually relieved by

**VOMITING.** It is very remarkable that neither Navier nor Plenciz, after having entered more particularly into the method of cure than any other writers, have never so much as mentioned



Vomiting. tioned the use of emetics.—Vomiting seems to be the remedy of nature : it stands foremost in her efforts to throw off the cause of the disease : it most amply fulfils the indications arising both from a consideration of the cause and of the effects. If we want to dislodge a poison from the fauces, and the mucous membrane of the nose, and to prevent its descent to the stomach, how shall we do it so effectually as by emetics ? if the poison already acting upon the nervous system, destroys the equilibrium of the circulating powers, how can we so readily restore that equilibrium as by emetics ? Does not the experience of every day confirm their efficacy in a variety of disorders dependant upon local congestions ?

But not to proceed further with questions that cannot fail to be answered  
in

in the affirmative, I will venture to assert that the liberal use of emetics, is the true foundation for successful practice in the Scarlet Fever and Sore Throat.

In the very first attack, a vomit seldom fails to remove the disease at once ---if the poison has begun to exert its effects upon the nervous system, emetics stop its further progress, and the patients quickly recover. If it has proceeded still further and occasioned that amazing action in the capillaries, which exists when the scarlet colour of the skin takes place, vomiting never fails to procure a respite to the anxiety, the faintness, the delirium.

In autumn when the throat was more affected ; when the tumefaction of the fauces was such that the patients  
could

could not swallow but with the utmost difficulty: when the peripneumonic symptoms threatened suffocation, and bleeding withheld its accustomed aid; an emetic opened the gullet, and unloaded the lungs, so that deglutition became easy, and respiration free.

Strong vomits.

But it is necessary to add, that a vomit only sufficiently strong to evacuate the contents of the stomach, is by no means adequate to these effects. The vomit must be powerful, and in ordinary cases repeated once in forty-eight hours. In those with more urgent symptoms daily, and in the worst cases twice in twenty-four hours. The patients never fail to express the relief they find after the operation, and the physician soon discovers it in the countenance and in the pulse. As to the formule of emetics the practitioner may vary

vary it as he pleases ; but I generally combine the *tartar emetic* with the *ipe-cacuanha*, that the purgative property of the one may be obviated by the nauseating quality of the other, at the same time that I wish to secure a certain violence of action upon the system. (a)

(a) In the true quinsy, or *angina inflammatoria*, I have used emetics for many years past with the greatest success. If the vomit is given the first or second day of the disease, and the patient keeps in bed a few hours afterwards, drinks gruel freely, and takes the tartar emetic in smaller doses to promote perspiration, he rises perfectly cured. If the inflammation has proceeded to such a length as to prevent deglutition altogether ; a little tartar emetic repeatedly put back in the mouth and suffered to dissolve there, will in time excite a vomiting. After the first discharge from the stomach, the patient is able to swallow a large draught of gruel, and thus to continue the operation. The most urgent symptoms are instantaneously relieved, and in a day or two sometimes with, and sometimes without repeating the emetic, he is quite well. If the inflammatory process has so far been suffered to proceed that matter is already formed ; vomiting promotes the rupture of the abscess, and dispels the surrounding inflammation. There may be cases in which bleeding is absolutely necessary, but I never yet met with one of those cases. I never direct any other medicine either internal or external, except an injected gargle to promote the discharge of the viscid mucus.

PURGING.



Purging.

PURGING. I consider the action of purgatives as altogether repugnant to the curative indications in this disease. If the poison is received into the system in the manner I suspect; the operation of a purge, instead of discharging it, can only promote its diffusion along the alimentary canal---but waving that consideration, let us enquire what benefit can be expected from purgatives. Their most obvious operation is the emptying of the guts, and thereby lessening the tension of the abdominal muscles. But we have shewn that the anxiety, the debility, the faintness, are in a great measure owing to the want of fullness in the larger blood-vessels; and a want of pressure upon them will produce the same effects. Hence the necessity of bandage when we hastily remove the water in an ascites---through the whole  
course



course of the disease, the belly is in general very regular in its discharges; but if a purging spontaneously supervenes, the patients sink so amazingly fast, that it is not within the reach of art to support them. Under these circumstances I have known a person so little indisposed as to dine below stairs one day, and yet upon a purging supervening, to die before the next day noon. Sauvage after a vomit advises purges; but he adds that the patients very often died.

Purging  
suddenly  
fatal.

**SUDORIFICS. CORDIALS. ALEXIPHARMICS.** The medicines generally signified by these denominations have but little to do in the cure of the *Scarlatina anginosa*. The patients are not disposed to sweat when the scarlet prevails upon the skin; nor do I know of any safe method by which we could attempt to excite a diaphoresis, even if we should expect

Sweating.

pect it to be advantageous. Under the autumnal appearance, when the skin had none of the scarlet colour, a warm bed, and warm diluents would easily induce a moisture upon it, but I never saw any evident advantage to be the consequence.

CORDIALS seem to be indicated by the great loss of strength and the feeble pulse; but those who are aware of the true cause of this debility will not readily be induced to give them. I have known them given, but the certain consequence was an increase of the restlessness, of the delirium, and of the heat. MORTON advises the mild alexipharmics, by which he means distilled waters and compound powder of contrayerva. Having observed the mild and gently stimulating effects of the contrayerva to be particularly grateful

Cordials  
hurtful.

to the fauces, I have in many instances used it, and mostly in conjunction with restitutive powders, which sit easy on the stomach, and counteract the tendency to purging; the *camphor* julep too gives nearly the same pleasing sensation to the throat.

DIURETICS. This too is a mode of relief altogether unnoticed by authors, and yet, next to emetics, the most to be depended upon in the cure of the disease. Diuretics beneficial. Some of the first cases I saw were cases of the most malignant tendency. Amongst other remedies I gave the *sene-ka root*; and frequently with advantage. But I soon had occasion to remark, that it procured relief only when it occasioned a copious flow of urine. This led me to the trial of other diuretics: but out of the numerous articles that are enumerated under that title,

the selection was difficult. *Vegetable acids* were neither pleasing to the palate nor grateful to the stomach ; and their effects upon the bowels made me fear to use them. The *vitriolic acid* bid fair to assist us in several points of view, but upon repeated trials it deceived my expectations. *Neutral salts* did no better ; indeed I did not venture to push them far, after observing that the common *saline draught* was but too apt to purge ; and even in those cases where it could be used freely without that effect, the patients never seemed advantaged by it. The acrid vegetable diuretics, such as *squills*, were likely to be too offensive to the stomach. In this situation it was, that some analagous reasonings, confirmed by the experience of a very sensible apothecary to whom I mentioned the subject, first directed me to the use of the *vegetable fixed alkaly*. Of this

I con-



I contrive to give a small quantity in almost every thing the patient drinks, so as to get down one or two drams every twenty-four hours. The *volatile alkaly* may likewise be given with advantage, but it is difficult to get a sufficient quantity of it swallowed.

ANTISEPTICS. *Acids* have been noticed under the article of diuretics, and wine is included under that of cordials, therefore we proceed to the consideration of *Peruvian bark*, *fixable air*, and the *dulcified mineral acids*.

No medicine ever had a fairer or fuller trial in any disease, than the bark Peruvian bark had in our epidemic. The great prostration of strength, the feeble pulse, and the sharp heat upon the skin, with here and there a livid spot, were thought to be such undeniable evidences of the

F 3

putrid



putrid tendency of the disease, and of the broken texture of the blood, that the bark was poured down with a most unsparing hand. And again in the autumn the increased disease in the throat, and the floughed appearance of the tonsils, conspired to keep up the delusion. It was very generally believed that bark was the only medicine that could be depended upon, and mankind had not yet forgotten how many lives were lost in the first attacks of the ulcerated Sore Throat, before they became acquainted with the efficacy of the bark.

We have already remarked that it is not an easy matter to distinguish betwixt the ulcerated sore throat and the Scarlet Fever and Sore Throat, notwithstanding the two diseases require such a very different mode of treatment.

The

The heat of the skin, the prostration of strength, and the feeble pulse have been considered before ; it remains to observe relative to the livid spots and the sloughed tonsils, that the former only appear where the cutaneous inflammation runs to its highest state, and are most probably owing to the effused contents of a ruptured capillary blood-vessel : the latter are likewise the consequence of a very high degree of inflammation, which is often kept up by an improper use of the bark and cordials. In some instances the inflammation attendant upon the disease is in itself sufficient to produce the sloughs, Does harm but they are generally the consequence of neglect or improper management ; for if the patient from the beginning is treated upon the plan I advise, the sloughs either never appear, or if they

F 4

have

have appeared never increase; and in twenty-four hours vanish altogether. But when that inflammation is still augmented by large and frequent doses of bark, it is astonishing to see how much the tumefaction increases and how rapidly the whole lining of the fauces is converted into a stinking slough. It is true nevertheless that many patients recover who take bark. The fact seems to be, that in mild cases an improper mode of treatment is not highly detrimental: it is only in the more dangerous state of the disease that we can do much harm. And I am ready to confess that in two or three of the first bad cases I saw, misled by so many marks of putrescency, I gave the bark; but the consequences were not such as could justify a continuation of its use.

*Plenciz*

*Plenciz* \* takes a good deal of pains to persuade us to the use of the bark; notwithstanding his general plan is that of the antiphlogistic kind; but he says that bleeding ought to be premised. At the end of his book he gives us seventeen histories, six of which are instances of the simple Scarlet Fever of Sydenham; two of the dropsy consequent to our epidemic, and nine of the true epidemic fever. To only one of these he gave the bark, and that patient died. Morton met with some cases in which the fever intermitted, and then the bark was thrown in successfully.

Finding that no good was to be expected from the bark, recourse was had to *fixable air*, which I had often used in

\* Tract. de Scarlatina, p. 103.



fevers where circumstances forbade the  
**Fixable air** use of bark; its sedative and antiseptic  
properties are now well known, and I  
expected to turn them to good account.  
But I was not at that time sufficiently  
acquainted with the nature of the dis-  
ease. **Fixable air** therefore was used,  
but it seemed to do neither good nor  
harm.

**Dulcified  
acids.**

The dulcified mineral acids in small  
quantities produced no advantage; giv-  
en more freely they increased the heat  
and inflammation. Bottled small beer  
and cyder were frequently asked for by  
the patients, and the first or second  
time swallowed with great avidity; but  
they soon disliked them, and even the  
attendants could not fail to remark the  
increase of heat and restlessness that  
they occasioned.

**OPIATES.**



OPIATES. In case of great inquietude and wakefulness, both Navier and Plen-  
ciz advise to give opium in small doses; Opium,  
but I never saw it effect the purpose  
for which it was given; on the contra-  
ry it visibly increased the distress of the  
patient.

BLISTERS in the summer appearance  
of the disease, are universally detrimen-  
tal; they never fail to hasten the deli-  
rium, and if the case is one of the worst  
kind, they too often confirm its fatal  
tendency. But when the pulse is so feeble  
that the nicest finger can hardly  
count its strokes for a quarter of a mi-  
nute together; when the oppression and  
anxiety of the patient is such as words  
can but ill describe; when the phy-  
sician expects that a few hours more will  
annihilate a life already sunk to so low  
an

an ebb, and when the friends will perhaps censure him if he forbears to try the efficacy of an application so universally, and I may add so indiscriminately used; it is not easy to resist the importunities of such symptoms under such circumstances.

Hurtful.

But to avoid a detail that would carry me to too great a length, suffice it to say, that after frequent opportunities of observing the events of cases in other respects similar, the blistered patients very often died, whilst those who were not blistered never failed to recover.

In the autumnal season, when the inflammation was less generally diffused through the body, blisters were less detrimental. If the brain was affected soon after the attack they did much mischief,

mischief, but if the inflammation was pretty much confined to the fauces, a blister was frequently applied round the throat, but with less advantage than the practice in quinries, ulcerated sore throats, and other local inflammations would teach one to expect.

GARGLES. In the summer the affection of the throat was frequently so trifling as not to demand any particular attention; but when the inflammation and swelling in the fauces became a principal cause of complaint, the use of gargles was very grateful to the patient. A decoction of contrayerva sweetened with oxymel of squills is what I have most frequently used; sometimes barley water acidulated with the marine acid; and sometimes the tincture of roses. When these gargles are forcibly injected by means of a large pewter syringe

Injected  
gargles.

syringe with a long pipe to reach over the tongue, it is amazing to see the quantity of viscid ropy stuff that is discharged, both from the fauces and nostrils. When there is a great disposition to the formation of floughs in the throat, Navier advises (a) to gargle with a mixture of highly rectified spirits of wine camphorated, and oxymel; which he says never fails to stop the progress of the gangrene. I am inclined to believe it is a good application, but have never had occasion to try it. After the fever abates, Sauvage uses a gargle of lime-water sweetened with honey.

**POULTICES.** Cataplasms of different kinds have been applied round the neck, but I cannot add with any par-

(a) - - - Progressum vero hujus internæ gangrænæ quam certissime impedit gargarisma ex oxymelle cum adjecto spiritu vini camphorato, qui vero Hoffmanni methodo sale alcali præparatus esse debet, ne aquosis mixtus lactescat. Navier in loc. citat.



ticular advantage. Upon the whole I think the less additional covering is made to the throat the better.

**WARM-BATHING.** The immersion of the feet and legs in warm water, though sufficient to procure sleep and abate the delirium in several kinds of fever, is not attended with any such desirable effects in this; nor did I ever perceive it to do harm. In cold weather, when there was no inflammation upon the skin, and the legs and feet were cold, it rendered the patient more comfortable; and I am much inclined to believe that in the greatest degree of scarlet efflorescence which existed in <sup>Tepid bath</sup> the summer months, the use of a tepid bath would have been productive of the happiest effects: but this is a matter of opinion only.



**TEMPERATURE.** In the heat of summer it was hardly possible to keep the patients sufficiently cool. A mattress to lie upon was found preferable to a feather bed, with the lightest covering for the body, and a free circulation of air. Patients that could sit up, were allowed only to lie down occasionally, and those whose strength would admit of it, were ordered frequently out of doors. This method a little modified, did very well through the greatest part of autumn; but when the winter cold took place, it was necessary to keep them more in bed, and in a room moderately warmed.

**DIET.** Those who were only slightly indisposed were kept pretty much from animal food, and fermented liquors. Those in a worse situation were allowed tea, coffee, chocolate, milk and water, gruel,

gruel, barley water, &c. and occasionally weak wine whey, or nitre whey. But nothing was more acceptable than a full draught of water fresh drawn from the spring. In this the patients were indulged in every exacerbation of heat, restlessness, or delirium, and it seldom failed to procure a temporary abatement of these distressing symptoms.

When the Fever ceases I generally give a few grains of calomel, and work it off the next day with Rochelle salts or any other mild purgative. If the nights are still passed with watchfulness, opiates are directed; and in the day time bark with small doses of salt of steel. If the debility is considerable wine is allowed rather liberally; but nothing affords such immediate relief as the application of blisters.

*Treatment in the Dropsical State.*

**W**HETHER the leucophlegmatic appearances are necessary consequences of the Scarlet Fever and Sore Throat, in bodies particularly predisposed to become dropsical; or whether they are the result of negligent or improper management, I will not take upon me to determine: But it may be worth observation, that I never yet have met with an instance of a patient becoming dropsical, who had been treated, during the Fever, according to the method advised in the preceding pages.

When called upon to visit patients in this situation, I commonly begin with giving calomel at night, and a mild purgative in the morning.

If

If a febrile pulse attends the other symptoms, an emetic is useful ; the saline draught, and other neutral diuretic salts. In case of great debility, comatose, or peripneumonic symptoms, large and repeated blisters are of infinite service : But in the common cases, when the dropical symptoms are the principal cause of complaint ; small doses of calomel and rhubarb, occasionally to keep the bowels open ; dilute solutions of fixed alkaly ; squills ; Seltzer water ; and other diuretics in daily practice, must be adapted to the disposition and temperament of the patient. When the urine flows freely, steel and other tonics must be employed, and the recovery will be greatly promoted by gentle exercise, high-seasoned food, wine, and the wearing of flannel in contact with the skin.



I cannot conclude this subject without noticing a remedy strongly recommended by Plenciz;† but not having had occasion to try it, the reader must depend upon his account of it.

℞ *Rhei electi*

*Spiritus salis coagulati āā drachmas duas*

*Mercurii dulcis*

*Auri fulminantis*

*Extracti scillæ āā drachmam dimidiam  
m. fiant pilul. c. rob juniperi, pondere unius  
alteriusve grani.*

In the exhibition of this medicine the following precautions are to be observed.

(a) *Firstly.* One or two of these pills are to be given every second or third

† Tractatus de Scarlatina. P. 121.

(a) *Primo,* Quod una alterave harum pilularum omni bihorio, aut trihorio, pro diversa ætatis aliorumque cir-  
hour;



hour; according to the age and strength of the patient. This quantity ought to procure three or four stools every day; but if it fails to do that, either the dose must be increased, or some purgative, such as extract of jallap, sulphurated scammony, or aloetic pill with scammony, must be added: by this means a salivation will be prevented. But

*Secondly*, the more effectually to prevent a salivation, the patient after each dose of the pills ought to drink some ounces of tea prepared with juniper berries, or a decoction of grass roots, warm.

cumstantiarum, ratione exhiberi debeat, quam dosim tres quatuorve sedes quotidie sequi debent, quæ si non succedant, tunc vel earum dosis augeri debet, vel prædictis pilulis magisterium mecoacanæ, aut diagridium sulphuratum, aut pilulæ Cochix addi possunt. Qua ratione dein salivatio impiedietur. Quare

*Secundo*, Ut eo certius salivatio impiedietur; debet æger post assumptas pilulas bibere calide aliquot uncias infusi bæccarum juniperi, aut decocti radicum graminis. Item

*Thirdly.* After taking these pills for two or three days, they must be omitted a day or two.

*Fourthly.* If the use of this medicine occasions too much disturbance in the habit, opiates will be proper, and if much feverish disposition prevails it must not be employed. - - - - -  
 - - - Within a day or two after the use of this remedy, there is generally a copious discharge of water both by urine and stool. - - - - - It

*Tertio,* Postquam bidui aut tridui his pilulis usus fuerit, debet ab earum usu una, alterove die abstinere.

*Quarto,* Si ab usu hujus remedii nimix turbæ in corpore concitari videantur, poterunt tales sopiri remediis paregoricis.

Tandem si in his, aliisque similibus affectibus notabilis febris adfit, debemus ab usu hujus remedii abstinere, quia timendum est, ne exinde febris augeatur. - - -  
 - - - - - ab usu prædicti remedii intra unam alteramve diem ingens copia feri, tam per urinas quam per alvum evacuari solet. - - - - - Adeoque

is not only in cachectic, leucophlegmatic, and dropfical cafes that this remedy is useful; but in the most obstinate alvine and urinary obstructions; provided they are not accompanied with inflammation.

So likewise in the suffocating catarrh, and in the humoral asthma, where chermes mineral, tartarised sulphur of antimony, squill, gum ammoniac, and other, even the most powerful remedies, produce no good effect, the *aurum fulminans*, with a grain or two of calomel affords an immediate relief.

non tantum in cachexia, leucophlegmatia, et hydrope, sed et in contumacissima alvi et urinæ obstructione, si inflammatio aberat, illud in usum vocabatur.

Item, In catarrho suffocativo, in asthmate humoroso, ubi chermes minerale, sulphur antimonii tartarifatam, scilla, gummi ammoniacum, aliaque, alias efficacissima remedia, inertio erant, aurum fulminans cum uno alterove grano mercurii dulcis, præsentaneum erat remedium. Plenciz. Tractatus 3. p. 124.

He further adds that this medicine was a secret of Dr. Weber's of Furnberg, who used it with great success in a variety of obstinate chronical diseases.



## C A S E I.

**A** Young lady 12 years of age, was suddenly seized in the evening with weariness, sickness, sore throat, and head-ache. A vomit was given the following day, and afterwards the bark. The third day the nausea still continuing, and the strength being greatly impaired, the vomit was repeated, the bark continued, and red wine negus directed for common drink.

The fourth day at noon I first was called in, and found her delirious, with a considerable degree of stupor. Her eyes of a fiery redness, her lips parched, her skin universally tumefied, of a full scarlet colour, and almost intolerably hot. Her tongue dry; her throat the colour



colour of her skin; her respiration quick, short, and sobbing; her pulse so rapid, so feeble, and so unsteady, as not to be counted.

I directed a vomit to be given immediately; (a) a large blister to be applied betwixt the shoulders; a solution (b) to be put into a quart of white wine whey, and the whole to be taken in 24 hours.

Fifth day. Her condition nearly the same. Had had no stool; urine small in quantity. The alkakine solution was continued; four grains of seneka root were given every four hours, and ten grains of James's powder at night.

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(a) R. Rad. Ipecac. Gr. vi.  
Tart. Emet. Gr. i. M. f. pulv.

(b) R. Sal Absinthii 3 ii.  
---- vol. ammon. 3ß.  
Aquæ fontan. 3 ii M. f. solut.

The weather being very hot, the doors and windows of the room were constantly kept open, and as much cold water as she would drink, was allowed every time she became more restless and delirious than usual.

Sixth day. Urine more plentiful. Her pulse could now be counted pretty certainly at 140 strokes in a minute. She had one stool in the night. Two blisters were applied to her legs, and a spoonful or two of a vomiting mixture (a) directed to be taken every four hours, or so as to keep up a pretty constant nausea.

Seventh day. Passed a better night. Pulse 125. Eyes less fiery; stupor a-

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(a) R. Tart. Emet. Gr. iii.  
Vini Ipecac. ʒ vi.  
Cretæ ppt. ʒ ii.  
Aq. fontan. ʒ vi.  
Syr. e Cort. Aurant. ʒß M.

bated,

bated, and she could answer sensibly to two or three questions. The vomiting mixture was repeated.

Eighth day. Got some sound sleep for the first time. The heat and redness of the skin considerably abated. Pulse 90; steady and sufficiently strong. Begins to call for food. As her belly had all along been rather costive, the following powder was directed. (a)

Ninth day. The feverish symptoms entirely gone. The skin peeling off. Urine plentiful, and depositing a farinaceous sediment. The following powder was ordered to be taken thrice every day. (b)

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(a) R. Sal. Polychrest. ʒß.  
Rad. Rhei ʒi.  
Calomel. ppt. Gr. iii. M. f. pulv. statim sumend.

(b) R. Cort. Peruv. subtiliss. pulv. ʒi.  
Rad. Contrayerv. Gr. x. M. f. p.

In a few days she was carried out, and by the assistance of bark and steel soon recovered her accustomed health; but not without the loss of her hair.

REMARKS. The imminent danger that this young lady appeared to be in, occasioned the blisters to be directed; and I had not at that time seen so much of the disease as could enable me to decide with precision against their use. Fortunately for the patient, they never rose at all. She was evidently better after every vomiting, and after every draught of cold water. She was very desirous one day of bottled perry: it was allowed her, diluted with water; but an increase of her restlessness, heat, and short breathing was so evident to those who had the care of her, that they soon refused to give it her. The  
fauces

## OF THE SCARLET FEVER

fauces were never floughed, nor much tumefied. One of the nurses was soon afterwards seized with the same complaints, but by an early application of nearly the same remedies she presently recovered.

## C A S E II.

**M**R. S——, a strong man, about 34 years of age, was seized with the usual symptoms of the worst kind of Scarlet Fever and Sore Throat. On the evening of the first day of the disease he called upon his apothecary, who gave him an emetic. The second day diuretics were prescribed, a gargle to his throat, a blister to his back; and in the evening the vomit was repeated. Vomiting being observed to be followed by a remission of the symptoms, he took two vomits upon the third day, and



and expressed himself relieved after each. Upon the fourth day I first saw him, and found him with a very quick feeble pulse, a skin universally scarlet and tumefied, exceedingly hot, breathing short, throat still sore; eyes red, great restlessness and delirium. A strong vomit was immediately prescribed, some powders composed of contrayerva and camphor, (a) and a diuretic solution.

He passed a restless night, but the fever abated the following day; ceased in a few hours afterwards; his skin peeled off, and in a short time he recovered perfectly.

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(a) R. Rad. contrayerv subtt. pulv. Gr. xv.

Camphor. Gr. v. M. f. pulv. secundis vel tertiis horis sumend.

R. Sal. absinthii ʒ ii.

----- vol. Ammon. ʒ i.

Aquæ fontan. ʒ i. f. solut. in lib. ii. Seri vinosi commiscend. et bibat æger liberaliter liquoris.

REMARKS.

## OF THE SCARLET FEVER

REMARKS. This was one of those cases in which the violence of the attack and the rapidity of the symptoms threatened the greatest danger. The alleviation of the distress of the patient after every vomit, was a proof of the propriety of that mode of treatment; but the quick recurrence of disagreeable symptoms argued the fatal tendency of the disease. The blister was not applied, and to the omission of that I attribute the safety of the patient; for where the violence of the inflammation can but barely be counterbalanced by the means we can command, the additional stimulus of a blister is sufficient to destroy the equilibrium.

## C A S E . . . III.

A Boy fifteen years of age, at a boarding-school about six miles from this place, was seized on Monday the  
26th

26th of October, with giddiness, sickness, and vomiting. He continued to play with his school-fellows till the predominancy of the sickness prevented him. He was cold and hot by fits ; he was weary ; complained of head-ache and a slight soreness in his throat.

Second day. The symptoms continued with the addition of prickling and itching in his skin, which turned red where he scratched it. This day he took an emetic by the advice of his apothecary.

Third day. He was brought in a chaise to Birmingham.

Fourth day. I saw him, when he complained of great head-ache, sickness at times, and unusual weariness. The whole of his skin was of a deep violet

H colour,

## OF THE SCARLET FEVER

colour, tending towards blackness. His tongue moist, of a whitish brown. Lips dry and parched. Throat nearly the colour of his skin, tumefied but not ulcerated or floughed. Eyes pretty clear. Flesh not very hot. Pulse 120, moderately strong. He was ordered to take two spoonfuls of the vomiting mixture (a) every half hour, and afterwards an ounce of the decoction (b) every two hours. Cold water was allowed when he called for it, gruel and weak wine whey.

Fifth day. The vomit worked him a good deal, and he was somewhat reliev-

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(a) R. Vini Ipecac. ℥ i.  
Tart. Emetic. Gr. vi.  
Aquæ fontan. ℥ vii. M.---

(b) R. Rad. Senekæ non contusi ℥ i. coque ex aquæ fontan. ℔ iii. ad ℔ i. et colat. adde  
Succ. Glychirr. ℥ ii.  
Sal. Absinthii ℥ i. ℔ M.---

ed. In the beginning of the night was restless, but got some sleep towards morning. He had made plenty of urine, but it smelt so strong the nurse had it thrown away. A little redness was now visible in his eyes, towards the outer corners. Pulse soft ; more steady than yesterday, 108. Lips not so dry. Throat less tumefied ; its colour, as well as that of the skin less intense. Had a small costive stool this morning. Repeat the vomit this evening, and continue the decoction.

Sixth day. Passed a good night. Urine in good quantity, less offensive to the smell, and its appearance nearly that of a healthy state. Throat quite well. Pulse 68, firm. Skin turning brown. Appetite returning. Fifteen grains of rhubarb, and three of calomel were given this night at bed time.



Eighth day. Continued free from complaints: slept well, eat well. Pulse 65. This morning, white blisters appeared upon several parts of his hands and fingers, which when cut discharged a small quantity of clear water.

REMARKS. The livid colour of the skin was thought in this case to indicate the highest degree of putrescency, and the most imminent danger to the patient: but I had learnt long before this to believe that the disease had nothing putrid in its nature; and when I considered the favorable appearance of the eyes, and the moderate velocity of the pulse, I could not coincide with the opinions that had been formed of the event. The white blisters have been mentioned by Plenciz, but he believes they never contain any fluid, and  
having

having frequently found that to be the case, I subscribed to his opinion ; but as the blisters in this patient were filled with a watery fluid, I suppose they were so in others ; only we did not happen to examine them until the fluid had been absorbed and evaporated.

## C A S E IV.

**A** Young Lady, near seven years of age, was seized on Friday the 30th of October with the usual symptoms of the Scarlatina anginosa. The scarlet colour appeared upon the skin the Sunday following, and began to vanish again on Tuesday, without any succeeding desquamation. She continued much indisposed until Thursday the 12th of November, when I was first desired to visit her.

Fourteenth day. I found her in a considerably sleepy state; much averse to being stirred. Her breathing difficult and rattling, particularly when lying down, for which reason she was generally kept upon the lap. Her skin dry; flesh not very hot: her pulse 136 in a minute. Tongue dry and brown in the middle; skin of her lips black and ragged. She was universally bloated, but her legs most so towards night. Her fauces appeared tumefied, and by the assistance of an injected gargle she throws up viscid mucus. Urine small in quantity, appetite altogether wanting.

She was directed to take four grains of James's powder, and to repeat the dose every hour for three times; afterwards two spoonfuls of a diuretic solution

tion (a) were given every second or third hour.

Fifteenth day. But little alteration. Continue the medicines.

Sixteenth day. Pulse 130. Urine more plentiful. In other respects nearly the same. (b) Six grains of fossil alkali purified, were directed to be taken in solution every four hours, and a gargle with oxymel of squills frequently injected into the throat.

Seventeenth day. Tongue clearer. In other respects but little alteration.

Eighteenth day. Discharges a great quantity of viscid, white, opaque stuff

(a) R. Sal. Diuret. ʒ iii.  
Sacch. alb. ʒ ii. ʒ  
Sp<sup>t</sup>. Lav. comp. ʒ ʒ  
Aq. hordeat. ʒ vi. M.---

(b) R. Calomel. ppt. Gr. iii.  
Puly. Test. Ostr. Gr. vi. M. f. p. statim fumend.

## OF THE SCARLET FEVER

from her throat and nostrils. Tongue quite clean. Flesh not hot. Belly regular. Swelling something abated. Complains of great foreness in her wrists and ancles. Pulse still 130. She was directed to drink freely of Seltzer water.

Nineteenth day. Had a better night. Pulse 120. Went out in a chaise and seemed refreshed by it. The sleepiness and swelling abated.

Twentieth day. Passed a good night. Pulse now only 108, and much firmer. Urine plentiful and depositing a copious lateritious sediment. Soreness of her limbs, and swelling of her legs considerably decreased. The bark was now directed, Seltzer water for her common drink, and daily exercise in a chariot.

Twenty-



Twenty-first day. Had a very good night. Makes more water than ever. Appetite begins to return.

Twenty-second day. Pulse 96. Stood alone to-day for the first time.

Twenty-fourth day. Appetite very good. Pulse 84. Strong enough to walk about the room. Skin peeling off.----From this time her further recovery was rapid and uninterrupted.

REMARKS. This young lady was first taken ill at a boarding-school some distance from Birmingham, so that I had no opportunity of knowing how she was treated in the beginning, but when I first saw her she was taking bark medicines. Her elder sister fell a victim to the same disease a short time before, and she I understood took bark and was blistered. A younger sister was taken ill upon Tuesday the 10th of November.

## OF THE SCARLET FEVER

November. The third, fourth, and fifth day, she took a strong vomit ; was allowed to drink freely of Seltzer water. Vomits were afterwards given every other day to promote the discharge of mucus from the throat and nostrils, and thus the cure was effected without the assistance of any other medicine.

## C A S E V.

**M**R. M---, 20 years of age, was seized in the evening of the 15th of November with slight alternating heats and colds. Passed a very restless night, hardly sleeping five minutes at a time. The next morning he felt his throat sore ; complained of sickness ; great pain in his head, back and limbs. Still hot and cold by fits. The third day his skin began to turn red, and he could not rest a minute for the troublesome itching and pricking all over him.

Fourth

Fourth day. I first saw him. His skin was now universally scarlet and intensely hot. His eyes red ; his tongue white, except at the end and at the edges. His fauces of a full scarlet colour and swelled, but without any appearance of floughs or ulcers. He complained of thirst, and was frequently sick, his pulse 120 ; small, but not very feeble. He was exceedingly restless, and delirious whenever he closed his eyes. He had taken one vomit ; powders of seneka and contrayerva, and a solution of salt of wormwood. These medicines were ordered to be continued, and a stronger vomit given to-night.

Fifth day. He vomited much, and afterwards had two purging stools. Had a bad night from restlessness and painful soreness in all his limbs, which still continues. Throat less sore, and less swelled.

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swelled. Scarlet colour of the skin nearly the same; but on the inside of the wrists there are a few very minute pustules with white heads, visible through a magnifying glass. Head easy; eyes not impatient of the light. Inclined to sickness when he swallows any thing. Urine plentiful, of a natural colour, with a light mucous cloud floating in it. He was ordered to drink gruel, tea, and cold water. To take a powder (a) every four hours and a wine glass full of solution (b) at the intermediate times.

Sixth day. Passed a restless night, and somewhat delirious. Inclination to sickness ceased. Urine very plenti-

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(a) R. Rad. Contrayerv. Gr. v.

Test. Ostr. ppt ʒß. M. f. pulv.

(b) R. Sal. Sodæ ʒ ii.

Extr. Glychirr. ʒ i.

Aq. fontan.

---- Menth. vulg. simpl. aa ʒ iii. ß

---- Cinnam. Spt. ʒ i. M.

ful.



ful. The scarlet on the upper part of his body less intense : that on his legs and thighs the same. Pulse 108. Complains chiefly of foreness all over him, but says he is much better. Let the same medicines be continued.

Seventh day. Little or no sleep in the night, being teased with the appearances of strange images the moment he closed his eyes. Scarlet colour turning brown. Great foreness about his neck and shoulders, but in other respects much better ; and able to sit up several times to-day. Pulse 98. He was ordered to take a purging bolus (a) at bedtime, his usual medicines the following day, and a composing draught (b) at night.

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(a) R. Rad. Rhei Gr. xii.  
Calomel. ppt. Gr. vi.  
Conf. Rosar. ℥i.  
Syrup. ut f. Bol.

(b) R. Syrup. e Mecon. ℥ii.  
Tinct. Thebaic. gutt. xv.  
Aquæ Menth. vulg. simpl.  
----- fontan. aa ʒ vi. M.



## OF THE SCARLET FEVER

Ninth day. Physic worked moderately. Passed the last night comfortably. Skin universally brown. Pulse 94. Eyes watery, and impatient of the light. Soreness partly gone. Appetite returning. The composing draught to be given again at night, and the next morning to begin with the tincture of bark and Virginia snake-root.

Eleventh day. Appetite good. Pulse 80. Eyes less tender. Skin peeling off. Tongue very sore, but nothing remarkable to be seen upon it.---From this time he continued mending daily, and was soon restored to health.

## C A S E VI.

**M**RS. — a married lady, about thirty-five years of age, felt a sensation of rawness in her throat on Friday evening the 20th of November ;  
but

but passed a good night. The next morning she was chilly, and weary, with an aching all over her. These symptoms continued till eight at night, when she became very hot, and continued so until Sunday morning. The forenefs in her throat was still but trifling. The preceding night she had taken five grains of James's powder, which excited a pretty copious perspiration. She continued very much indisposed all Sunday, the feverish symptoms ran high, and a blister was applied on the right side of her neck. On Monday the feverish symptoms continued nearly the same: The left side of the fauces was now as much affected as the other, a blister was therefore applied to the left side of the throat.. Some white specks which had appeared in the throat before, were now increased so as to spread over both tonsils, and the back of the fauces. In this situation I was desired

to visit her. I found her labouring under great anxiety; her countenance pale, her respiration difficult, her voice inarticulate, her pulse 130, rather irregular, but not very feeble. She had passed the night with such oppressive feelings about her chest and stomach that she durst not attempt to sleep, and her deglutition was now so much impaired, and the attempt so extremely painful, that nothing less than the greatest degree of fortitude could enable her to swallow. She had hitherto taken bark freely, but it purged her: Small doses of laudanum were then added to prevent that effect, and the bark was continued to the amount of a dram of the powder every four hours, and two ounces of strong decoction with tincture in the intermediate times. When it was impossible to swallow any more bark, cordial draughts composed of con-

fectio

fectio cardiaca and volatile salt were directed. She had felt her oppression and distress increase after every dose of the bark, but filled with the idea of her disease being putrid, and that nothing but the bark could stop the progress of the gangrenous sloughs, she had persevered with unusual assiduity in the method prescribed.

I immediately ordered a vomit (*a*) which cost her very great exertion to get down. It acted in a short time, and she was sensibly relieved. When the sickness abated she took half one of the cordial draughts that was in readiness; afterwards a powder (*b*) every two hours,

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(*a*) R. Tart. Emet. Gr. ii.  
 Vini Ipecac. ℥ i.  
 Aq. fontan. ℥ vi.  
 Acet. Scillit. ℥ ii M. ---.

(*b*) R. Rad. Senek. subtt. pulv. Gr. v.  
 - - - Contr. pulv. Gr. vii.  
 Cretæ ppt. ℥ ℥ M. f. pulv.

## OF THE SCARLET FEVER

and used the gargle (a) very frequently with the assistance of a syringe.

Fifth day. Slept very comfortably for four hours in the night. The great oppression and anxiety removed. The sloughs in the fauces beginning to separate at the edges; her voice still inarticulate, and the act of deglutition considerably painful, but not so much so as to prevent her getting down her medicines and a sufficiency of liquid nourishment. Pulse 120.

From this time she continued mending. On the seventh day she was universally better and slept very comfortably. On the eighth day she eat solid

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(a) R. Rad. Contrayerv. ʒß.

Aquæ fontan. ʒxii. coque ad

ʒviii et colat. adde

Oxymel. Scillit. ʒß.

Sal. Absinth. ʒi M.



food for her dinner; and on the ninth the floughs in her throat were all cleared away. In the beginning of this disease her urine was small in quantity, but as she grew better it became very considerable. The syringing occasioned very great quantities of viscid mucus to be discharged from her throat and nostrils. Through the whole course of the disease she had a great tendency to delirium whenever she attempted to sleep. As she recovered her skin peeled off; and she was tormented for some days with a great foreness of her tongue.

REMARKS. The tendency to the formation of gangrenous floughs in the throat, seems to be nearly proportioned to the violence of the inflammation. If this inflammation is increased by improper treatment, formed upon the idea of the disease being putrid, the consequences

sequences are a rapid increase of the inflammation, and of the gangrene. But if emetics are exhibited at first, and occasionally repeated, I never see the sloughs continue for twenty-four hours. It is observable that in this case the desquamation of the skin took place, notwithstanding there was neither eruption nor discoloration at any time of the disease.

THE END.













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